

**Evaluation of EPA Actions to Address Elevated Cancer Risks from Air Toxics Emissions from Point Sources**  
**OA&E-FY19-0091**  
**WP E.09.c**

**PURPOSE:** To show whether rolling annual average ambient chloroprene concentrations near Denka are above the 100 in one million cancer risk level.

**SCOPE:** Insert line into EPA's graph of rolling annual average ambient chloroprene concentrations near Denka to delineate the 100 in one million cancer risk level.

**SOURCE:** A) [Link](https://www.epa.gov/sites/production/files/2020-09/documents/final_epa_community_ambient_air_monitoring_data_summary_report_9-24-20_with_attachment.pdf): Summary Report, U.S. Environmental Protection Agency (EPA) and Louisiana Department of Environmental Quality (LDEQ) Air Monitoring for Chloroprene Concentrations near the Denka Performance Elastomer LLC (DPE) Facility in LaPlace, Louisiana, May 25, 2016 through July 16, 2020, September 2020 ([https://www.epa.gov/sites/production/files/2020-09/documents/final\\_epa\\_community\\_ambient\\_air\\_monitoring\\_data\\_summary\\_report\\_9-24-20\\_with\\_attachment.pdf](https://www.epa.gov/sites/production/files/2020-09/documents/final_epa_community_ambient_air_monitoring_data_summary_report_9-24-20_with_attachment.pdf), accessed 3/29/21)

B) [Link](https://www.epa.gov/sites/production/files/2020-11/documents/addendum-to-summary-report-november-2020.pdf): Addendum to Summary Report, Air Monitoring for Chloroprene Concentrations in LaPlace, LA from May 25, 2016 through September 26, 2020 (<https://www.epa.gov/sites/production/files/2020-11/documents/addendum-to-summary-report-november-2020.pdf>, accessed 12/7/20)

C) [Link](https://www.epa.gov/sites/production/files/2020-10/documents/initial_phase_report_continuous_air_monitoring_101620.pdf): Initial Phase Report, U.S. Environmental Protection Agency (EPA) Continuous Air Monitoring for Chloroprene Concentrations near the Denka Performance Elastomer LLC (DPE) Facility in LaPlace, Louisiana, March 2020 through August 2020, October 16, 2020 ([https://www.epa.gov/sites/production/files/2020-10/documents/initial\\_phase\\_report\\_continuous\\_air\\_monitoring\\_101620.pdf](https://www.epa.gov/sites/production/files/2020-10/documents/initial_phase_report_continuous_air_monitoring_101620.pdf), accessed 3/29/21)

D) [Link](https://www.epa.gov/sites/production/files/2021-03/documents/continuous-monitoring-summary-march-10-2020-through-february-11-2021.pdf): EPA, Continuous Air Monitoring Summary Results for Chloroprene, March 10, 2020 – February 11, 2021 (<https://www.epa.gov/sites/production/files/2021-03/documents/continuous-monitoring-summary-march-10-2020-through-february-11-2021.pdf>, accessed 3/30/21)

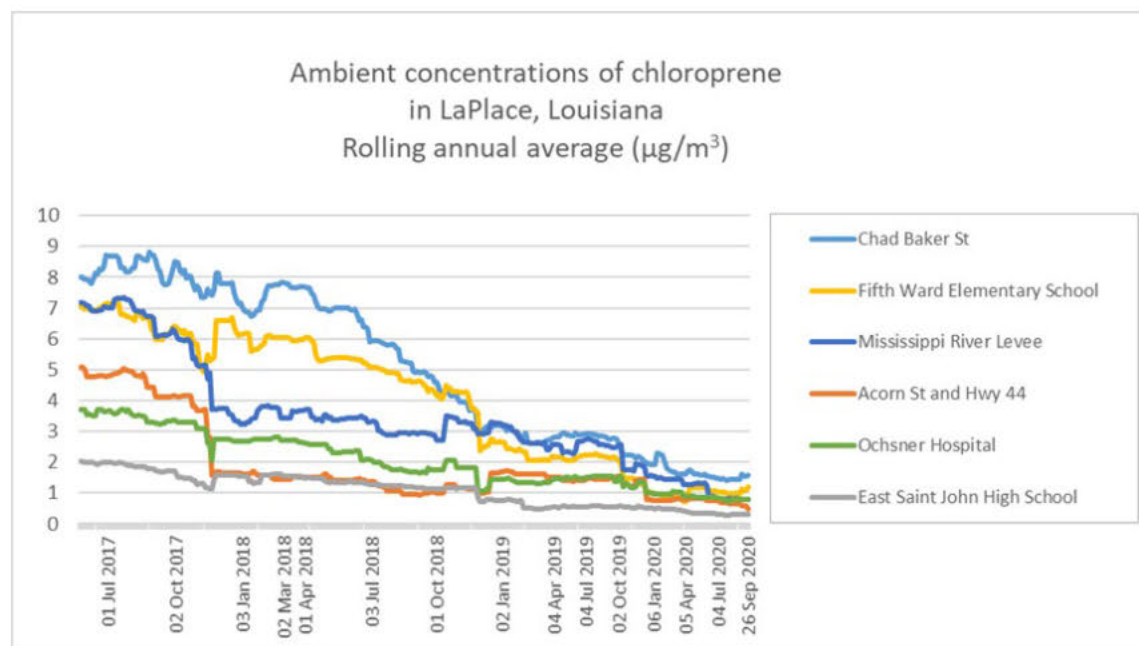
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**CONCLUSION:** The high rolling annual average ambient chloroprene concentrations at the six monitoring sites near Denka since 2017 indicate that the existing NESHAPs for Group I polymers and resins and synthetic organic chemical manufacturing industry may not be protective of human health.

**DETAILS:**

EPA calculated the rolling annual average ambient chloroprene concentrations from monitoring data collected at six sites near the Denka facility, and the resultant rolling annual averages were plotted as shown in Figure 1 below, which comes from Source B > Pg. 1 of 3. (For "near the Denka facility, see Source A, pdf pg. 3, para. 1)

**Figure 1: Rolling annual average ambient chloroprene concentrations for six monitoring sites near Denka in LaPlace, LA**



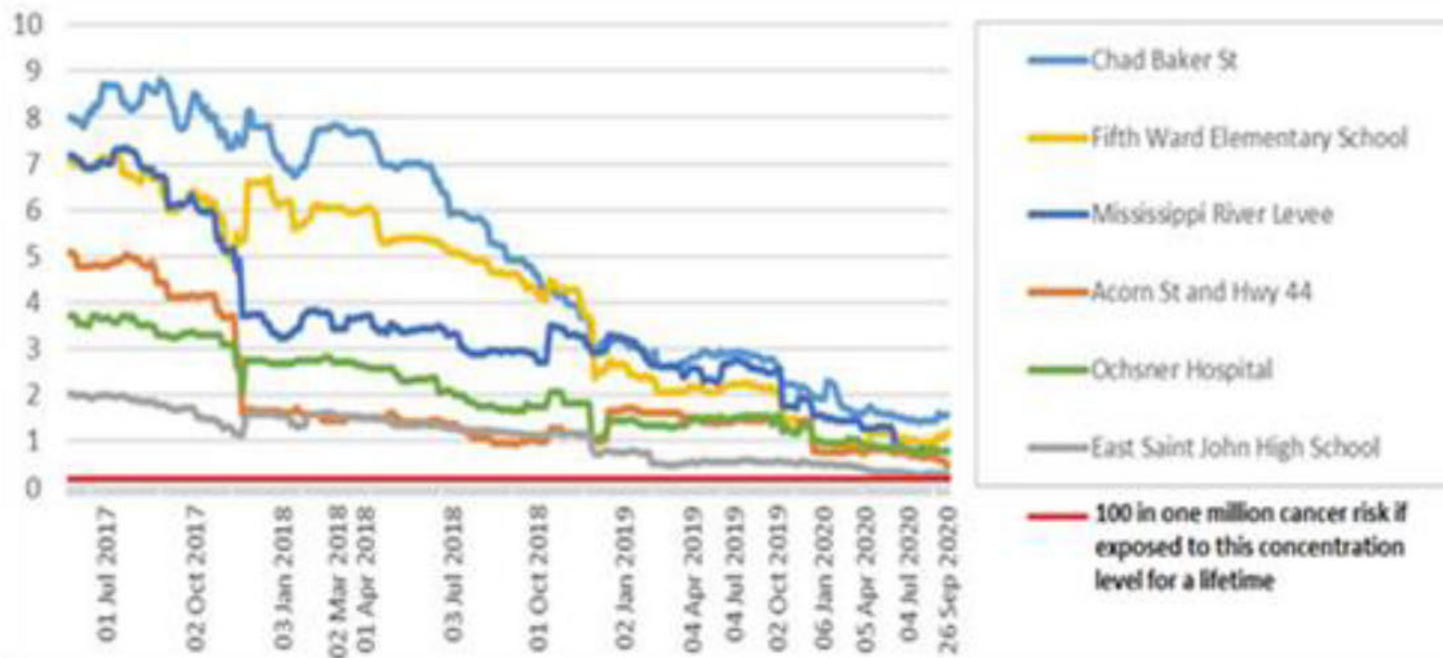
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Source: EPA image (Source B > Pg. 1 of 3)

To delineate the 100 in one million cancer risk level, Evaluator edited the figure in the Source B > Pg. 1 of 3 pdf file using Microsoft Paint. Given that the 100 in one million cancer risk level is associated with exposure to an ambient chloroprene concentration level of  $0.2 \mu\text{g}/\text{m}^3$  for a lifetime, (E.09.b > [Link](#): Source H > Pg. 1 of 2 > 2<sup>nd</sup> paragraph that begins "EPA completed the most recent IRIS assessment...." > last sentence that begins "Based on this value, the concentrations associated with the 100-in-1 million...."), Evaluator added a red line to Figure 1 at the  $0.2 \mu\text{g}/\text{m}^3$  level to delineate the 100 in one million cancer risk level, and the resultant figure is shown as Figure 2 below. Given that the lowest annual average chloroprene concentration (post installation of the RTO control device) was determined to be  $0.3 \mu\text{g}/\text{m}^3$  at East Saint John High School on 9/26/20, (Source B > Pg. 2 of 3 > 2<sup>nd</sup> figure titled "Comparing first pre-RTO annual average and last post-RTO annual average chloroprene concentrations ( $\mu\text{g}/\text{m}^3$ )") Evaluator added the red line right below the East Saint John High School data point for 9/26/20 (gray line) in Figure 1. The resultant figure is Figure 2 below.

[Link](#): [Link](#): [Link](#): **A** Figure 2: Rolling annual average ambient chloroprene concentrations ( $\mu\text{g}/\text{m}^3$ ) at six sites near Denka in LaPlace, Louisiana from 2017 to 2020.

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Source: EPA-developed image with OIG-inserted line for the 100 in one million cancer risk level if exposed an ambient chloroprene concentration level of 0.2 µg/m³ for a lifetime.

[Link: B](#) The high rolling annual average ambient chloroprene concentrations since 2017 in Figure 2 indicate that the existing National Emission Standards for Hazardous Air Pollutants for Group I polymers and resins and synthetic organic chemical manufacturing industry may not be protective of human health. [Evaluator conclusion based on [Link: B.04.c](#) > Source A > Pg. 4 of 7 > Last paragraph > First sentence that begins with "The first step..." and the high rolling annual average ambient chloroprene concentrations since 2017 at the six monitoring dates being above 0.2 µg/m³ and the fact that Denka is subject to these two NESHAPs (See E.09.a > [Link: Details section](#) > 2<sup>nd</sup> paragraph that begins "Denka is subject to the following two NESHAPs with respect to chloroprene emissions...." and the two bullet points that follow)]

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| Reviewer Comment<br>(and Date of Review) | Team Response<br>(and Date of Response) | Resolution<br>(and Date of Resolution) |
|--|---|--|
| (b) (5)<br>[REDACTED]                    | (b) (5)<br>[REDACTED]                   | WP reviewed and approved. JN<br>4/1/21 |
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